

## \* NOTICES \*

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention reduces the usage fee of agricultural chemicals and manure as much as possible, and relates to the method of fully demonstrating the original vital force of vegetation and raising vegetation.

[0002]

[Description of the Prior Art]Recently, in our country, the voice of the consumers who ask for safe and delicious food has been mounting day by day. The motion to which it is supposed that he would like to find out the way [ situation / severe ] of survival also at the spot of agricultural output in the high-value-added agriculture what is called by chemical-free farming, such as low levels of pesticide and organic agriculture, has come out. However, on the other hand, as for agricultural output, if neither a chemical fertilizer nor agricultural chemicals are used, it is also actual that to be unable to do is almost made into common sense, and there are not few people who consider manure and agricultural chemicals to be necessary evils even in those who tackle what is called organic farming. What is called organic farming is considered for the purpose of giving the nourishment which crops absorb with an organic fertilizer instead of a chemical fertilizer. On the other hand, chemical-free farming aims at raising vegetation with no agrochemicals and a non-chemical fertilizer based on the following ideas. Originally vegetation carries out healthy training under the providence of Nature. If crops carry out healthy training and a natural ecosystem maintains balance, a pest will not pose a problem fundamentally, either. The nourishment which crops need existed in the nature infinitely, and soil is provided with the power which originally supplies it to vegetation. If there are neither manure nor agricultural chemicals, there will be no antecedent basis in the idea that crops do not grow up in any way. What human being should do is only preparing the conditions which demonstrate this natural power, especially the power of the ground. In the ground, the countless living thing which is not seen is clear to eyes. It is what is called a soil microbe. When considering making the ground, it is one of the big antecedent bases on which chemical-free farming which uses neither manure nor agricultural chemicals may be enacted for it to be necessary to pay one's attention to a soil microbe above all, and to support activity of this soil microbe. The idea of such chemical-free farming is

suggested also in much articles.

[0003]

[Problem(s) to be Solved by the Invention]In order to shift to chemical-free farming mentioned above from the agricultural practice depending on agricultural chemicals or a chemical fertilizer, it is necessary to make the useful soil in which a countless soil microbe can work actively recover the soil in which potential inherent powers declined by many use of the chemical fertilizer. For that purpose, while various microorganisms maintain balance in the ground, the source of vitality for working actively, i.e., food, is required. saying [ the food ] -- the substance in which it is microorganisms mutually or vegetation is secreted originally -- it is an organic matter in the ground, etc. further. Therefore, soil improvement was performed by the method of transplanting the various microorganisms in a compost into soil, by feeding a good compost into soil so much conventionally. The various microorganisms in a compost are also improving the living thing nature of the soil in which disease germs etc. have increased in number. And soil is granulated and will be in the swollen and soft state where it had moderate water retention and water permeability. However, although it can say that the soil improvement depending on a compost is unavoidable as treatment in the early stage of improving the soil in which inherent powers declined remarkably by agricultural practice, a great labor will be required in order to maintain the soil which microorganism nature recovered. Although agricultural practice can be provided by purchasing almost all materials, since the reason does not have the organization which supplies a cheap and good compost adequately in chemical-free farming, it is because it is necessary to support oneself in a compost as much as possible. Since it becomes easy to generate a disease germ at summer etc. as a result of throwing in a compost so much, it becomes easy to produce the situation which must use a germicide.

[0004]A lot of [ a compost etc. ] manure in which the purpose of this invention solves the technical problem of a Prior art mentioned above, There is a soil microbe in providing the method for growing plant which can recover and maintain the useful soil which can work actively, can fully demonstrate the original vital force of vegetation by it, and can raise vegetation, without using agricultural chemicals.

[0005]

[Means for Solving the Problem]A method for growing plant which starts the invention according to claim 1 in order to solve an aforementioned problem sprinkled vegetable activation liquid containing a cane sugar, a yeast fungus, and a ray fungus in soil. Vegetable \*\*\*\*\* concerning the invention according to claim 2, In claim 1, vegetable activation liquid containing minerals (minute amount element), such as potassium (K), calcium (Ca), magnesium (Mg), iron (Fe), manganese (Mn), copper (Cu), and molybdenum (Mo), is used. Vegetable \*\*\*\*\* concerning the invention according to claim 3 mixes the 2nd vegetable activation liquid containing vegetable activation liquid, and the 1st vegetable vital force material and enzyme (catalase) containing a cane sugar, a yeast fungus, a ray fungus, and a mineral, and sprinkled it in soil. It is the activity extract extracted from a hinoki, a pine, a Japan cedar, psyllium, etc., and vegetable vital force material which is the main ingredients of the 2nd vegetable activation liquid is also a nutrient while it is a vital force agent which has the resistance which receives sick.

[0006]

[Function] Since a yeast fungus and a ray fungus take in a cane sugar, and increase in soil and a number of percent of them dies one by one by sprinkling the vegetable activation liquid containing a cane sugar, a yeast fungus, and a ray fungus in soil so that it may indicate to above-mentioned claim 1, Since the cadaver of a bacillus always occurs and the cadaver serves as nourishment (instead of being manure), the application amount of manure is substantially reducible over a long period of time. Since the resistance force to the increase of the vegetable vital force, illnesses, etc. becomes strong, the application amount of agricultural chemicals can also be reduced substantially. Since a ray fungus has a phytopathogenic filamentous bacterium and an antibacterial relation, it can become extinct and control a phytopathogenic filamentous bacterium by growth of a ray fungus, and can suppress vegetable sick infection. Since vegetable photosynthesis can be activated by sprinkling water and the vegetable activation liquid which contained the mineral which is an element required for photosynthesis with carbon dioxide in claim 1 so that it may indicate to claim 2, vegetable growth growth can be promoted more actively. By mixing the 2nd vegetable activation liquid containing vegetable activation liquid, and the 1st vegetable vital force material and enzyme containing a cane sugar, a yeast fungus, a ray fungus, and a mineral, and sprinkling in soil so that it may indicate to claim 3, By operation of the vegetable vital force material which is a component of the 2nd vegetable activation liquid at the same time the same use as claim 2 is acquired by the component of the 1st vegetable activation liquid. Since the capability to disassemble hydrogen peroxide into water and oxygen at the time of photosynthesis improves by operation of an enzyme while it is urged to composition of the inorganic substance by the photosynthesis which uses an organic matter in the living body as a raw material and absorption of carbon dioxide etc. activates, vegetable growth growth can be activated more. Although the vegetable activation liquid containing a cane sugar, a yeast fungus, a ray fungus, etc. is not a chemical composition, since it can be mass-produced industrially, it can carry out extensive supply cheaply. Therefore, unlike the conventional natural agriculture, the natural agriculture by the method for growing plant of this invention can provide almost all materials by purchase.

[0007]

[Embodiment of the Invention] The example at the time of applying the method for growing plant concerning this invention to the grass training method of a golf course hereafter is shown.

year-round management spraying condition [ of the green of an example 1 pen cross vent glass ]: -- the -- the vegetable activation liquid (a cane sugar.) of one The 2nd vegetable activation liquid (vegetable vital force material (activity extract extracted from a hinoki, a pine, a Japan cedar, psyllium, etc.) and an enzyme are contained.) is sprinkled [ a yeast fungus, a ray fungus, and a mineral ] for content twice per month at a rate of 2 times - 3 times for every a month.

component amount: -- cane-sugar: --  $1\text{g/m}^2$  and cane-sugar + yeast-fungus + ray fungus [ ] -- a 1.5cc spraying method: foliar application and per [  $1\text{m}^2$  ] -- 1-1.5 l. (tank car use)

Result : [ Fixability to the antibacterial action or soil rhizosphere to a soil disease germ, for example, fusarium, RIZOKUTONIA, PISHIU, etc., ] It was able to decompose through screening in the viewpoint of fecundity, and the environment condition of the lawn was able to be maintained good by operation of the useful

microorganism using bacteria, a ray fungus, a filamentous bacterium, etc. which were obtained.

Conventionally, disassembly of the soil organic matter was promoted by soil sterilization, the quantity to be stored of soil nutrients decreased, and, as a result, soil was hard. And although the quick bacillus of growth was recovered immediately and had been in the soil condition very unstable as bacteria reproduction environment in disinfection soil, since the vitality which the vegetation itself has was pulled out by the method of this invention, healthy growth is seen.

[0008]year-round management spraying condition [ of the green of an example 2 pen cross vent glass ]: -- the -- the vegetable activation liquid (a cane sugar.) of one The 2nd vegetable activation liquid (vegetable vital force material (activity extract extracted from a hinoki, a pine, a Japan cedar, psyllium, etc.) and an enzyme are contained.) is sprinkled [ a yeast fungus, a ray fungus, and a mineral ] for content at a rate of 2 times for every a month twice per month.

Component amount: The same result as Example 1 and the same spraying method:example 1 was able to maintain the environment condition of the lawn as well as [ almost ] the :example 1 good.

[0009]year-round management spraying condition [ of example 3 KOURAI grass green ]: -- the -- the vegetable activation liquid (a cane sugar, a yeast fungus, a ray fungus, and a mineral are contained) of one -- the 1-time [ per month ], and 2nd vegetable activation liquid (vegetable vital force material (activity extract extracted from a hinoki, a pine, a Japan cedar, psyllium, etc.) and an enzyme are contained.) -- the rate of 2 times for every a month -- spraying.

Component amount: As for the same result as Example 1 and the same spraying method:example 1, the almost same result as the :examples 1 and 2 was obtained. However, that it is more than the case of a pen cross vent glass needs to be manure sprinkled (3 times - 5 times) for a growth period (summer).

[0010]Example 4 the weed killer spraying spraying conditions of the green of a pen cross vent glass : at the place which is in the state which sprinkled  $1 \text{ m}^2$  per 0.02 cc of buster liquid (18.5% of HOSHINETO liquid) (trade name) as a weed killer intentionally, and to which the leaf turned yellow in the green of a pen cross vent glass in mid-July. The mixed liquor of the 1st vegetable activation liquid and the 2nd vegetable activation liquid was sprinkled by the daily dose of 0.1 cc of  $1 \text{ m}^2$  hits, six days afterward, tales doses of mixed liquor was sprinkled again, and the situation of green was observed. Although it did not go by recovery, since the green portion was a little visible to the leaf, tales doses were sprinkled seven days afterward again. Then, since the effect began to have shown up notably, when the state of the root was investigated, the white root had rooted 5 mm - 1 cm. Then, it strove for recovery by sprinkling what mixed and diluted the above-mentioned mixed liquor and manure.

Component amount : when the same result as Example 1 sprinkled :weed killer in green accidentally, or when a weed killer permeates into green by a rainfall etc., to re-cover the grass of the portion is made into common sense, but. It has checked that green could be used, without re-covering grass by sprinkling the mixed liquor of the 1st vegetable activation liquid and the 2nd vegetable activation liquid as mentioned above. Although recovery of the root in the situation where the weed killer was sprinkled in the summer usually was not seen, it is able to be led to recovery. Then, green was able to be used in the state of the grass which carried out

autumn recovery. Although there were few roots than other greens which did not sprinkle a weed killer, there is also none of so much problems and green has been used.

[0011]Example 5 the weed killer spraying spraying conditions of the green of a pen cross vent glass : Urge run liquid (asulam 80%) (trade name) is uniformly sprinkled as a weed killer in the green of a pen cross vent glass from May to July by the daily dose of 0.15-0.2 cc of 1 m<sup>2</sup> hits, The annual bluegrass in green was removed. A damage will appear in the grass at that time, and a vegetable vital force agent will be used. The medical harm came out and turned yellow in the whole green side at the beginning. Therefore, the mixed liquor of the 1st vegetable activation liquid and the 2nd vegetable activation liquid was sprinkled all over green by the daily dose of 0.1 cc of 1 m<sup>2</sup> hits, and tales doses were sprinkled after that on the 7th, and also it sprinkled also on the 10th.

Component amount: State comparison of the green in which the same result as Example 1 sprinkled the above-mentioned mixed liquor 20 days after the last spraying day of the :above-mentioned mixed liquor, and the green which was not sprinkled was performed. As a result, in the green which sprinkled the above-mentioned mixed liquor, the color of the leaf surface assumed green and it had recovered. The state of a root is also good and the root was already in it by elongation about 2 cm. On the other hand, a leaf turns yellow in green without spraying of the above-mentioned mixed liquor, there is also a place which natural complexion has exposed to some places, and the medical harm was advancing even in the state where it cannot be used if grass is not re-covered. Even if further one month passed after that, the medical harm with urge run liquid did not come out, but the green which sprinkled the above-mentioned mixed liquor had recovered it in the state beyond it like the green which did not use urge run liquid. On the other hand, although recovery was seen [ green side which re-covered ] from before as for a few, the state of the root was not good, and the leaf surface had changed into the state where the green portion and the yellow portion were intermingled. Although the above example is a case where it applies to training of grass, this invention is applicable effective also in training of a cucumber, a tomato, a ginseng, a spinach, a Japanese radish, and other various crops.

[0012]

[Effect of the Invention]In short, according to this invention, the following outstanding effects can be demonstrated above. By having sprinkled the vegetable activation liquid containing a cane sugar, a yeast fungus, and a ray fungus in soil according to the method for growing plant concerning the invention according to claim 1, Since a yeast fungus and a ray fungus take in a cane sugar, and increase in soil, a number of percent of them dies one by one, the cadaver of a bacillus always occurs and the cadaver serves as nourishment, the application amount of manure is substantially reducible over a long period of time. Since the resistance force to the increase of the vegetable vital force, illnesses, etc. becomes strong, the application amount of agricultural chemicals can also be reduced substantially. According to the method for growing plant concerning the invention according to claim 2, to a cane sugar, a yeast fungus, and a ray fungus in addition, by having sprinkled water and the vegetable activation liquid which contained the mineral which is an element required for photosynthesis with carbon dioxide, Since vegetable photosynthesis can be activated in addition to the effect of claim 1, vegetable growth growth can be promoted more actively. The 1st vegetable activation

liquid that contained the cane sugar, the yeast fungus, the ray fungus, and the mineral according to the method for growing plant concerning the invention according to claim 3, Since the 2nd vegetable activation liquid containing vegetable vital force material and an enzyme is mixed and it was made to sprinkle in soil, the effect of claims 1 and 2 -- in addition, while it is urged to composition of the inorganic substance by the photosynthesis which uses an organic matter in the living body as a raw material and absorption of carbon dioxide etc. activates by operation of the vegetable vital force material which is a component of the 2nd vegetable activation liquid, Since the capability to disassemble hydrogen peroxide into water and oxygen at the time of photosynthesis improves by operation of an enzyme, vegetable growth growth can be activated more.

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[Translation done.]